Date: Fri, 2 Sep 94 04:30:11 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #291
To: Ham-Ant

Ham-Ant Digest   Fri, 2 Sep 94   Volume 94 : Issue 291

Today's Topics:

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 31 Aug 1994 18:09:58 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!usenet.ins.cwru.edu!
news.csuohio.edu!vmcms.csuohio.edu!R0264@network.ucsd.edu
Subject: 6 meter antenna????HELP!!!
To: ham-ant@ucsd.edu

In article <33vmr5$mpc@usenet.INS.CWRU.Edu>
ah157@cleveland.Freenet.Edu (Rob Henry) writes:

>
>
>

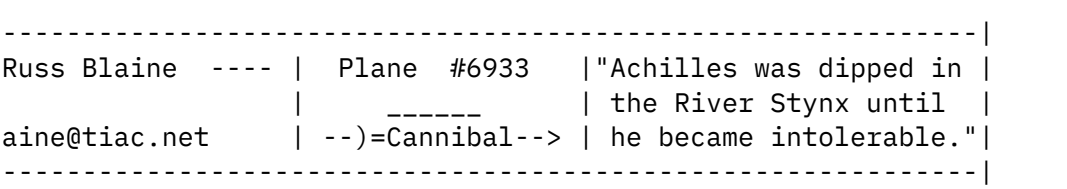
>Coulds soeone reccomend an antenna for 6 meters fm?
>homemade or bought, any sources or ways to make one./
>I tried winding a half wavelength around pvc pipe,one ground and one positive
>rf but it does not seem to work all that well.
>leave mail please.
>rob
>kb8sqh

Why not start with a plain dipole? What purpose does the helical winding
serve -- shortening? A 6-meter dipole should be pretty short (11 feet?)
without helical winding. If you want it vertical, just hang one end
with a string and insulator,
from something like a tree branch, and bring the coax away at right angles
for at least a quarter wave length, about 6 feet should do it.
Maybe there is some constraint that you did not tell us about.
 ---- Phil Emerson, AA8JO. email: R0264@vmcms.csuohio.edu

Date: 1 Sep 1994 04:27:01 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
gatech!udel!news.sprintlink.net!sundog.tiac.net!max.tiac.net!
rblaine@network.ucsd.edu
Subject: AC House wiring used as antenna?
To: ham-ant@ucsd.edu

I have seen adapters that plug into an AC outlet in a house which use the
houses's AC wiring as an antenna. Would this work? I am interested in
this mainly for use on a CB, but I'm also interested in it for general
scanner use. Any advice or comments appreciated.

--



Date: 31 Aug 1994 22:51:06 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: apartment antennas
To: ham-ant@ucsd.edu

In article <94240.092424JBAACK31@MAINE.MAINE.EDU>,
<JBAACK31@MAINE.MAINE.EDU> writes:

Have you tried the AEA Isoloop? It doesn't take much space, and performs
very well on 10-30.

Date: 1 Sep 1994 02:22:57 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!udel!news.sprintlink.net!
indirect.com!grizzarv@network.ucsd.edu
Subject: Ball mount summary
To: ham-ant@ucsd.edu

I posted a question about ball mounts with either:
1) teeth to anchor the ball in place on the insulator, or
2) a stud with a left-hand thread.

It appears there are no such beasts.

Ah well - the guy wasn't too obtrusive. It's going back on.

de kg7yy

Date: 1 Sep 1994 04:13:17 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!udel!news.sprintlink.net!
sundog.tiac.net!max.tiac.net!rblaine@network.ucsd.edu
Subject: CB antenna questions.
To: ham-ant@ucsd.edu

Here's my situation:
I just bought a 5-watt radio shack CB and a magnetic mount mobile CB
antenna. I also bought an SWR meter. I hooked it all up and it worked
fine, so i started adjusting the antenna according to the manual that
came with it to get peak performance. I hooked my SWR meter up,
calibrated it, and got about 1.6 on channel 1 and 3.2 on channel 40. So I
started trimming the antenna down. I probably took about 1/2" - 3/4" off
of the length, and ended up with about 1.1 or 1.0 on channel 1 and 2.4 on
channel 40. Should I keep going to get channel 40 down? Did I go too far?

Another question: People on the airwaves report my signal to me in
"pounds". Someone 1-3 miles away said I was coming in at about 6 or 7
pounds. I was talking to someone 10-15 miles away as well with limited
success and to someone 4 or 5 miles at 3 pounds. What is a "pound"? Will
this increase as my SWR ratios improve? Will my range decrease
significantly as a result from the antenna trimming?

Thanks for your help.. reply by email if possible.

--

|---|
| ---- Russ Blaine ---- | Plane #6933 |"Achilles was dipped in |
| | ______ | the River Stynx until |
rblaine@tiac.net	--)=Cannibal-->	he became intolerable."

Date: Wed, 31 Aug 1994 18:24:47 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!usenet.ins.cwru.edu!
news.csuohio.edu!vmcms.csuohio.edu!R0264@network.ucsd.edu
Subject: CB omnidirectional ant. as Ham ant.
To: ham-ant@ucsd.edu

In article <interso-3108940037030001@interso.hip.cam.org>
interso@cam.org (Archibald d'Arsenic) writes:

>
>I have a 18 feet long omnidirectional base station antenna (SOLARCON A-99)
>mounted on the roof of my house. It was installed for CB.
>
>But, it is possible to use it for SWL?
>
>If yes, it is possible to use it for CB transceiving and SWL.
>There is an bi antenna tuner for using the antenne on both application.
>
>Thanks for your help.
>
>You can reply to
>interso@cam.org

Presumably, it will work for CB transceiving, if that is what it was
installed for. You can test that function easily enough, I would think.
If so, it can be used for SWL too, maybe with a couple of tricks,
depending on the frequencies of interest. It might not be the best
SWL antenna, but you will pick up something. Here are some tricks to
try for SWL. (1) try it with just the center conductor of the coax
connected to your SWL rig. (2) connect the center conductor and the
shield together, and both to your SWL rig.

You should not need an antenna tuner for using the antenna with CB.
If you want to use an antenna tuner for SWL, you don't need a
heavy duty one. Actually, I doubt if a tuner will help much with
SWL anyway, but it might. -- Phil Emerson, AA8JO,
email: R0264@vmcms.csuohio.edu

Date: Wed, 31 Aug 94 13:23:00 -0500
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!agate!iat.holonet.net!cencore!
forrest.gehrke@network.ucsd.edu
Subject: Does SWR change...
To: ham-ant@ucsd.edu

CE>I have been challenged to prove that SWR can change radically
CE>with transmission line length, so here is my actual antenna...

CE>Xmtr--->50 ohm--->Rg58-->1/1 balun---->450 ohm---->50 ohm resonant
CE>   SWR meter   Ladder-Line   Antenna

CE>Assumptions: Transmission lines are lossless. SWR meter is reading
CE>the actual SWR. Balun is a perfect transformer.

CE>1. If the ladder-line is an even number of electrical half-wavelengths,
CE>the SWR meter will read 1/1.

CE>2. If the ladder-line an odd number of electrical quarter-wavelengths,
CE>the SWR meter will read 81/1. ((450/50)*450)/50

CE>On 28.4 MHz, changing the ladder-line length by about ten feet can cause
CE>the SWR on the coax to change from 1/1 to 81/1. Who was it who said that
CE>can only happen in a fantasy world?

Ye Gods and little fishes!

Cecil, you ARE living in a fantasy world. Either that or you
are trying a bait and switch on us and hoping nobody notices.

If you are serious and I will assume you are, consider the
experiment you have set up.

1. You have an even number of half-waves 450 ohm line with a 50 ohm
   load attached. Result: you present to the 50 ohm coax a 50 ohm
   load and you measure 1:1 SWR (assuming no loss), regardless of
   the length of the 50 ohm line.

2. You have an odd number of quarter-waves 450 line with a 50 ohm
   load attached. Result: you present to the 50 ohm coax a 4050 ohm
   load and you measure 81:1 SWR, (again assuming no loss) and
   it will be so anywhere along that 50 ohm line. The ladder line
   is simply our old familiar 1/4 wave impedance transformer.

Now, look at which line you changed the length. It wasn't the

50 ohm line. If you had an SWR meter calibrated for 450 ohms,
it would have shown a 9:1 SWR regardless of your changing the
length of that ladder line. But for the 50 ohm line you merely
presented two different loads and got the result you asked for.

C'mon Cecil, get real. This is bogus!

CE>73, Cecil, KG7BK, OOTC (Not speaking for Intel)

That disclaimer is appropriate. I would sure hope Intel
wouldn't subscribe.

--k2bt

 ≥ SLMR 2.1a ≥ On the 8th day God said "SWR constant all along line".

Date: 31 Aug 1994 20:08:40 GMT
From: ihnp4.ucsd.edu!news.cerf.net!gopher.sdsc.edu!news.tc.cornell.edu!
travelers.mail.cornell.edu!news.kei.com!ssd.intel.com!chnews!news@network.ucsd.edu
Subject: Does SWR change...
To: ham-ant@ucsd.edu

In article <342bfq$6r1@charm.magnus.acs.ohio-state.edu> Bob_Dixon@osu.edu writes:

>This is an invalid example.

An invalid example of what? This is my exact antenna. The SWR in the coax
changes with changes in the length of the ladder-line. I had to add
6 ft. of ladder-line to get a match on 10m. This is the same
configuration as many G5RV's and changing the length of the 300 ohm
portion of the G5RV will definitely have a radical effect on the SWR at
the transmitter end of the 50 ohm coax. (The two sections of transmission
line form a series-section transformer).

>The SWR in the ladder line is the same no matter how long it is, and
>that is the only thing of relevance in your example.

The 450/50 value in my equation is the SWR on the ladder-line and it is
constant. It is the SWR in the coax that we are measuring and it varies
wildly with minor changes in the length of the ladder-line.

>if you leave the coax load constant (same antenna and same length ladder
>line), then the swr in the coax does not vary if you change its length.

That's true if one assumes lossless transmission lines. In reality, with
my G5RV on 17m, the SWR meter at the transmitter end of the 70 ft run

of RG-58 measured 5/1. That means the SWR at the coax/ladder-line junction
was 20/1. If I halved the length of coax, I would measure an SWR of 8/1 at
the transmitter end. Do you disagree?

This is not aimed at the antenna "gurus" except to ask you guys to
please be more careful with your all-encompassing declarations.

73, Cecil, KG7BK, OOTC (Not speaking for Intel)

--
Intel, Corp.
5000 W. Chandler Blvd.
Chandler, AZ 85226

Date: 1 Sep 1994 04:40:12 GMT
From: pa.dec.com!nntpd.lkg.dec.com!iamu.chi.dec.com!little@decwrl.dec.com
Subject: Does SWR change...
To: ham-ant@ucsd.edu

In article <340v8a$pbh@chnews.intel.com>, Cecil_A_Moore@ccm.ch.intel.com writes:
|>I have been challenged to prove that SWR can change radically
|>with transmission line length, so here is my actual antenna...
|>
|>Xmtr--->50 ohm--->Rg58-->1/1 balun---->450 ohm---->50 ohm resonant
|>   SWR meter   Ladder-Line   Antenna
|>
|>Assumptions: Transmission lines are lossless. SWR meter is reading
|>the actual SWR. Balun is a perfect transformer.
|>
|>1. If the ladder-line is an even number of electrical half-wavelengths,
|>the SWR meter will read 1/1.
|>
|>2. If the ladder-line an odd number of electrical quarter-wavelengths,
|>the SWR meter will read 81/1. ((450/50)*450)/50
|>
|>On 28.4 MHz, changing the ladder-line length by about ten feet can cause
|>the SWR on the coax to change from 1/1 to 81/1. Who was it who said that
|>can only happen in a fantasy world?

This is because the line is not matched to the source. In your case you
have built a series-section transformer. No one is going to argue that
a transmission line with a characteristic impedance differs from the source
and load is not going to affect the SWR as measured at the source when its
length is varied.

Pick up a copy of either the ARRL Antenna Book, or Maxwell's book called

Reflections. Either will explain what is happening in the above circuit.

73,
Todd
N9MWB

Date: 31 Aug 1994 22:20:30 -0400
From: uunet.ca!uunet.ca!io.org!nobody@uunet.uu.net
Subject: GAP antenna
To: ham-ant@ucsd.edu

I have used a GAP antenna for the last three years and have some comments
although I have no experience with the Titan. Compared to the R7, the GAP
cannot be adjusted or tuned. It is really a dipole with matching rods and in
a single antenna version will produce unity gain at best. My GAP results in
reasonable SWR only while planted in the ground and installed even 10 ft
above ground sent the SWR to 3 or more. Finally the DX-VI which I have
results in heard signals of 10db less than a wire dipole in the same
location. Transmitted signals result in several S units less to the same
receiving station.
   Having said all that, the antenna is well built and works as described. I
have confirmed over a hundred countries with it and during better portions
of the solar cycle works very well. I would recommend it as a good antenna
for those of us with small city lots and smaller budgets.
hope that helps
de VE3SVL dave

Date: 30 Aug 1994 10:04:56 GMT
From: ihnp4.ucsd.edu!agate!doc.ic.ac.uk!bright.ecs.soton.ac.uk!
pdh@network.ucsd.edu
Subject: One-way propagetion?
To: ham-ant@ucsd.edu

In <33l9l3$1a2i@info2.rus.uni-stuttgart.de> deap1032@servus11.rus.uni-stuttgart.de
(Bruegemann) writes:

>Or are there scattering effects that work only one way?

There shouldn't be, no-one has suggested a believable mechanism,
but I've heard this often enough to believe in it.

--
[] Peter Harris, Optoelectronics Network Supervisor, Southampton University []

"Sir, you will either die on the gallows or of the pox !"
"That, my Lord, depends on whether I embrace your principles or your mistress"
John Wilkes to The Earl of Sandwich, Parliament, November 1763

Date: Wed, 31 Aug 1994 12:26:01 UNDEFINED
From: ihnp4.ucsd.edu!ucsnews!newshub.sdsu.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!EU.net!Germany.EU.net!netmbx.de!midas.cellware.de!
wsw.cellware.de!wsw@network.ucsd.edu
Subject: Q: slitted tube antennas
To: ham-ant@ucsd.edu

Hello out there!

I have heard, that some kind of slitted tube can be used as an antenna. Could
anybody tell me, where to find some documentation and formulae about this?
I think they should be very robust and good for areas with strong winds?

Thanks for your help.

73µs
Stefan (DD6FM @ DB0GR)

Date: 31 Aug 94 21:30:31 -0500 CST
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!math.ohio-state.edu!
darwin.sura.net!CrystalData.COM!americon!B._Paul_Palmer@network.ucsd.edu
Subject: z
To: ham-ant@ucsd.edu

From: Paul.Palmer@pcs.huntsville.al.us (B. Paul Palmer)
Reply-To: Paul.Palmer@pcs.huntsville.al.us

Paul (Cliffy) Palmer / KE4IDG

Palmer Computer Solutions
P.O. Box
Madison, AL 35758

Date: 1 Sep 1994 04:44:11 GMT
From: pa.dec.com!nntpd.lkg.dec.com!iamu.chi.dec.com!little@decwrl.dec.com
To: ham-ant@ucsd.edu

References <1994Aug25.020651.196034@zeus.aix.calpoly.edu>,
<Cv2nqv.KpC@news.Hawaii.Edu>, <1994Aug30.221703.28609@miavx1>
Reply-To : little@iamu.chi.dec.com (Todd Little)
Subject : Re: Does 73 Magazine have high SWR?

In article <1994Aug30.221703.28609@miavx1>, vgblackwell@miavx1.acs.muohio.edu (V.
George Blackwell) writes:
|>u> I found an older ('65) ham projects book in our campus library which
|>> spoke of using lamp (`zip') cord as an antenna lead in. It works.
|>> Tubes could withstand a lot of punishment. I wouldn't expect any
|>> modern book to suggest using zip cord, for the transistors in your
|>> final are rather `sensitive'. Thus, your `duh' comment is answered.
|>>
|>> Jeff NH6IL
|>
|>Lamp cord has a surge impedance of aprox. 72 ohms.
|>
|>Good luck
|>
|>

Sure you can use zip cord and its impedance isn't necessarily 72 ohms. Lamp
cord is fairly variable and its impedance should be measured if you want to
determine its effect on your antenna system. Also remember that it's not
likely to be a particularly low loss feedline.

73,
Todd
N9MWB

End of Ham-Ant Digest V94 #291
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